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THE FEDERAL VALUATION OF UTILITIES

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It has been objected that the valuation of our railways now being made by the Interstate Commerce Commission will not be worth its cost. But this is not a question of expense. While the cost will not in fact be excessive, having relation to the interests involved, the thing must be done sooner or later and the sooner the better.

The United States is today trying an experiment which has never been worked out to a conclusion in the past. The revenues of our railroads for the last fiscal year exceeded \$3,000,000,000. The property which produced this enormous income is private. This private property the government, state and national, finds it necessary to "regulate" and in this process of regulation it is doing or preparing to do, among other things, the following:

To determine the amount of securities which shall be issued;

To fix the standards by which the roadway and equipment shall be constructed and maintained;

To prescribe the schedules upon which trains shall be run and the train crews which shall be used in the operation of those trains;

To determine the charge which may be made for every service rendered by the common carrier.

I have, for one, long believed that the government must possess and exercise when necessary all the above authority. In no other way can society protect itself. And if these powers are wisely exercised there still remains a broad and satisfactory field for the scope of private enterprise, but it must be obvious that such authority may be pushed to a point where little opportunity for initiative or direction is left to the owner of this capital.

Upon the unreasonable exercise of the regulating power there are two limitations.

The first is economic. The billions which are already invested in these properties were put there, for the most part, because the investor believed that his investment would be safe and his return

a fair one. But for this belief only a fragment of the enormous sums which are in fact invested in our railways would ever have gone there.

Large sums will be required for the further development of these agencies of transportation in the future. How large these sums will be depends upon the industrial development of this country and the demands which are made upon them, but it is beyond doubt that within the next half century enormous amounts will be required. Whence is this money to come? It must be obtained, unless the government itself is to take over or finance these properties, exactly as the present investment has been obtained—from the private investor who will invest for precisely the same reason in the future as in the past. Unless the investing public believes that the money paid for a railroad stock or a railroad bond will be safe and will yield a just return, it will not seek that investment.

Within certain limits the government can impound the money which has been invested and compel additional investment to protect that already made. But this process can continue but a short time and can produce only comparatively slight results. In the near future new money must come from new investors.

The second limitation is one of law. The federal constitution guarantees to the private owners of our railroads and other public utilities a fair return upon the fair value of the property devoted by them to the public use.

It must be evident upon the most superficial consideration that the value of the property is a basic fact lying at the foundation of all intelligent treatment of these utilities. No commission can determine the amount of securities to be issued or the rates to be applied, nor can it even fix the standards of construction, maintenance and operation without an accurate knowledge of this fact. The government itself cannot intelligently make and apply rules which shall protect the public upon the one hand and do justice to the investor upon the other without this same knowledge. In dealing with this question there must be a point of departure. No rule of universal application can be devised which will not work more or less injustice as to the past; given a point of beginning, it is possible to formulate rules which will divest the future of that uncertainty which will most certainly deter legitimate investment.

The importance of reaching a definite conclusion as to this value is becoming every day more obvious. But what is the "fair value" of this property and how is it to be determined?

One school of thinkers declare that we should ascertain as accurately as possible the total amount which has been invested in a given enterprise, and that the amount of this actual investment is the value, assuming that the management has been honest and intelligent.

Another class contend that not the amount of money which has been paid into the enterprise from its inception but the actual cost of the items of property which are now being devoted to the public service, with or without depreciation, should control.

A third theory is that the cost of reproducing the property as it exists under present conditions is the measure of value. If the cost of construction has advanced, the utility gains; if it has declined, the utility loses.

A fourth class accept the reproduction theory but urge that not the cost of reproduction new but the cost of reproduction new less depreciation is the true test. The owners of the property should be allowed a return upon the cost of that property in its present state, not upon the theory that it is new.

The Supreme Court of the United States has apparently said that no one of the above methods can be used alone but that the value of a property must be determined upon a broad consideration of all these aspects and perhaps others.

Congress plainly intended by the Valuation Act of March 1, 1913, to provide for the collection of all those facts which need to be known in applying any one of the above theories or any combination of them. The commission is required to ascertain and report:

- Original cost to date;
- Cost of reproduction new;
- Cost of reproduction less depreciation;

Not only is the commission required to give these facts as to the property as a whole but it must report in detail as to "each piece of property." It is also required to state any other values or elements of value which may attach to the property; to give certain facts as to lands; to report all aids and donations of every kind; to

give a complete corporate and financial history of the property and its owners and users past and present.

It was the manifest intention of Congress to provide for the marshalling of every fact which could bear upon the value of the public utilities embraced, for the act includes not only railroads but telegraphs, telephones and pipe lines when subject to the jurisdiction of the commission.

For the purpose of discharging the duties thus imposed upon it the commission has created a Division of Valuation. This division decides nothing; it simply gathers the information called for under the direction of the commission and turns it over for its use. All questions arising in the prosecution of the work must be passed upon by the commission itself.

The work of this division divides itself into three general classes—engineering, land, and accounting. To show cost of reproduction new and cost of reproduction new less depreciation, exclusive of land, is an engineering problem and to deal with it an engineering force has been organized. The requirement that each piece of property shall be dealt with in detail, as thus far interpreted, requires the preparation of an inventory which shall list the property of the carrier by units; that is, the inventory will show the number of yards of grading in the property or a given section of the property, distributed between the different classes, as earth, solid rock, loose rock, etc.; the number of ties, the kind, and whether treated or untreated; the number of tons of rails distributed in various classes; the bridges, the buildings, etc., all itemized so that it is possible to know the price applied to each item.

In the making of this inventory or in the verification of the inventory when furnished by the carrier, the engineers of the commission actually examine the property. The quantities are measured and within certain limits the various kinds of property are enumerated. It is not in the nature of things possible to observe every article of property, nor is this at all necessary in order to reach a reliable conclusion, but the government does examine a representative portion which is supposed to fairly represent the whole. In the matter of ties, for example, which is one of the large items in the cost of the average railroad, no attempt is made to count every tie but a certain section of each mile selected at random is counted.

The engineering part of this work involves a much greater

expenditure of time and money than do the other branches. At present about 1,000 persons are employed in this branch.

The engineering work was developed slowly. It was uncertain at the outset just what ought to be done or how it should be done. It is only within the last six months that this work has been, so to speak, in full swing. At the present time about 4,000 miles of line per month are covered by our engineers. It is hoped that the present force will dispose of substantially 50,000 miles a year. There are in the United States about 250,000 miles of line and of this nearly 50,000 miles will have been surveyed by January 1. Should the present rate of progress be maintained, therefore, the surveys should be well towards completion in four years from the first of next January.

One of the most difficult things connected with this work is the statement of depreciation. An article of property may lose its value under the action of the natural elements alone. The tie decays whether used or not although the use may hasten the end of its life. The life of a rail depends almost entirely upon the amount and character of the traffic which passes over it and the quality of its maintenance. The bridge goes out of service because it is no longer of sufficient size to support the heavier loads which are placed upon it although otherwise in perfect condition. The problem of combining these different forms of lessening value, giving to each its due and proper weight in each case, is an extremely perplexing one.

The stating of depreciation also adds enormously to the work itself since if that is to be done with any degree of accuracy a careful examination is necessary where otherwise a simple check might suffice.

The units when ascertained are being assembled and the condition of depreciation is being stated so that nothing remains save the application of unit prices. Up to the present time no final prices have been applied. The prices themselves can only be ascertained and certain questions arising in their application can only be answered by a comprehensive examination of the records of the carriers. If that examination were confined to the few carriers now under valuation, the conclusion might be altogether misleading. This delay in the application of prices will not cause any

delay in the final completion of the work since when the application of prices is fairly begun it can go forward rapidly.

Some of the most delicate problems in the valuation of railroads arise in connection with lands. The proportion of value which land bears to other property varies with different carriers; taking the country as a whole it is perhaps 25 per cent of the whole. A considerable portion of this present value is unearned increment that is, the increase in value of the naked land since it was acquired by the carrier, and there will be sharp controversy as to how far the carrier is entitled to the benefit of this element of value which has cost it nothing. In many cases the privilege of using its right of way for railroad purposes has been donated to the carrier without a conveyance of the fee itself. For example, the government of the United States gave to the Northern Pacific Railway the right to use for railroad purposes a strip of land four hundred feet wide through all government lands from the head of the Great Lakes to Puget Sound. What value is to be assigned to that grant in putting a value upon the property of the Northern Pacific Company?

It is generally understood that it costs a railroad company more to purchase a right of way than the value acre for acre of adjacent lands. In the past it seems to have been assumed that the value of the right of way would be determined by inquiring what it would cost the railroad to obtain that right of way at the present time and the method employed was to ascertain the value of similar adjacent lands and to increase the value thus obtained by some multiple.

The Supreme Court of the United States in the Minnesota Rate Case apparently held that the reproductive method was not the proper test of present value. Its decision apparently was that the present value of railroad lands was ordinarily limited by the value of adjacent lands of a similar character unless the railroad had actually paid a greater amount. The value of its lands would therefore be ascertained by determining the number of acres used and applying the price of similar adjoining or adjacent lands. This sum would be the present value unless that railroad had actually paid a greater sum in the acquisition of the lands.

Up to the present time the Division of Valuation has been ascertaining those facts which would enable the commission to fix the value of railroad lands upon this basis. It has divided those

lands into various classes, has determined the amount of each class, and has ascertained the value of similar adjoining and adjacent lands. It has also ascertained in all cases where this was possible the original cost of the land.

The carriers earnestly insist that the above interpretation of the decision of the Supreme Court is not correct and that the present value of their lands is what it would cost to obtain those same lands at the present time. The commission itself has not yet interpreted the Minnesota Rate Case, nor has it determined how the present value of these lands shall be estimated.

To carry forward the land work a land section of the Division of Valuation has been organized. This work necessarily comes after that of the engineers and the organization itself was subsequent to that of the engineering section. At the present time 70 men are employed in this service who cover from 2,500 to 3,000 miles per month. This force in the near future will be increased to a point where it can keep abreast of the engineering work.

A third section of the division has been organized for the conduct of its accounting work, which divides itself into three general classes:

1. Corporate and financial history.
2. Original cost of the property now in existence.
3. Studies in prices and depreciation.

Under the first head the corporate and financial history of the property, its owners and users is dealt with. The company which originally constructed the road is ascertained and its history traced down to the present time, thus showing in detail the development of the system.

In this work special attention is given to the issue of stocks, bonds, notes, and all other forms of obligation. The amount and the time of the issue is stated, together with its character and the consideration received, whether money, property or services. If money, the actual amount realized by the company is shown and what became of the balance. No attempt has been made thus far to estimate the value of services or of property received for securities.

An attempt is made to show the amount of money received and expended by the corporation during its entire life and to state the

purposes for which the expenditures have been made. It is never possible to do this exactly and the result is often of little value.

The general purpose is to ascertain the amount of money which has been actually invested in the enterprise for the purpose of comparing that amount with the present capitalization of the company and the reproductive cost of its property.

Up to the present time the original cost referred to in the Act has been treated by the Division of Valuation as an accounting proposition; that is, it has been assumed that Congress intended to inquire for the original cost as shown by the books of the carrier. Our accountants have been endeavoring to give, as required by the Act, "in detail as to each piece of property" original cost to date. This has been generally found to be impossible. Previous to 1907 the books of the carriers were not so kept as to disclose this information in a reliable and accessible form; but that fact can be ascertained as to certain classes of property like land and equipment, and also with respect to many structures, as bridges and buildings when of considerable size. Wherever the information exists in available shape it is being compiled and will be reported.

Finally the accountants examine the account books and other records of the carrier for the purpose of ascertaining the prices actually paid by it in recent years for the various kinds of property which enter into the construction of the railroad and its equipment as well as the cost of erecting certain structures and of performing certain pieces of work. They also determine the life of various kinds and articles of property and of parts of other articles as shown by actual replacements and renewals. The information thus accumulated is of first importance to the engineer in fixing the prices to be used in his estimate of reproductive cost and in his statement of depreciation.

There are now employed in the accounting section 155 men and it is probable that this force must be somewhat, although not greatly, increased.

The division has also commenced an inventory of telegraph property and is covering at the present time about 6,000 miles of line per month. This work would be carried forward at a more rapid rate were it possible to obtain from the owners of this telegraph property the pre-inventory information which is required. The owner must furnish certain facts and documents before the

work of the government can begin and there is a limit to the amount which can be reasonably called for.

The Valuation Act requires that the valuation shall be kept good when completed; that is, that the commission shall inform itself of extensions, additions and retirements and shall correct its valuations from time to time accordingly. This is a most important provision and what shall be finally done under it is a matter of very grave concern. The commission has already passed an order requiring carriers whose property has been inventoried to keep a detailed account of all changes and make report of the same to it. Exactly how the information thus furnished will be used in correcting the valuation has not yet been determined.